

APPENDIX E: Water Quality Criteria

APPENDIX E -- WATER QUALITY CRITERIA FOR CLASS A (EXCELLENT) FROM STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

(i) Fecal coliform organisms:

- (A) Freshwater – fecal coliform organism levels shall both not exceed a geometric mean value of 100 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 200 colonies/100 mL.

(ii) Dissolved oxygen:

- (A) Freshwater – dissolved oxygen shall exceed 8.0 mg/L.

(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

(iv) Temperature shall not exceed 18.0 degrees C (freshwater) or 16.0 degrees C (marine water) due to human activities. When natural conditions exceed 18.0 degrees C (freshwater) and 16.0 degrees C (marine water), no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3 degrees C.

Incremental temperature increases resulting from point source activities shall not, at any time, exceed $t=28/(T+7)$ (freshwater) or $t=12/(T-2)$ (marine water). Incremental temperature increases resulting from non-point source activities shall not exceed 2.8 degrees C.

For purposes hereof, “t” represents the maximum permissible temperature increase measured at a mixing zone boundary; and “T” represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.

(v) pH shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) with a human-caused variation within the above range of less than 0.5 units.

(vi) Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

(vii) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent

upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).

- (viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.